

PRIOR ART

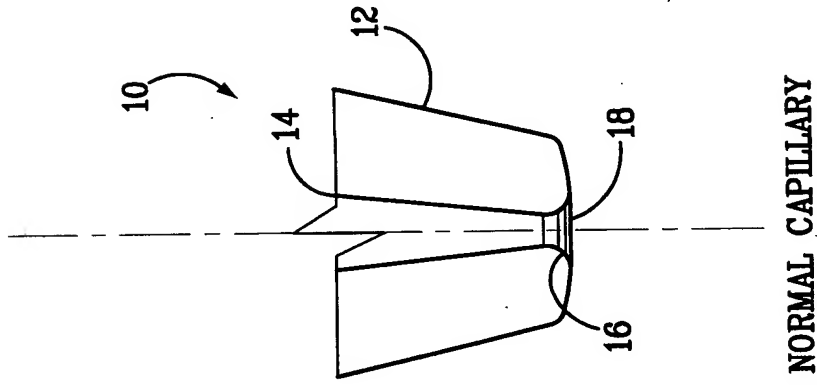


FIG. 2

PRIOR ART

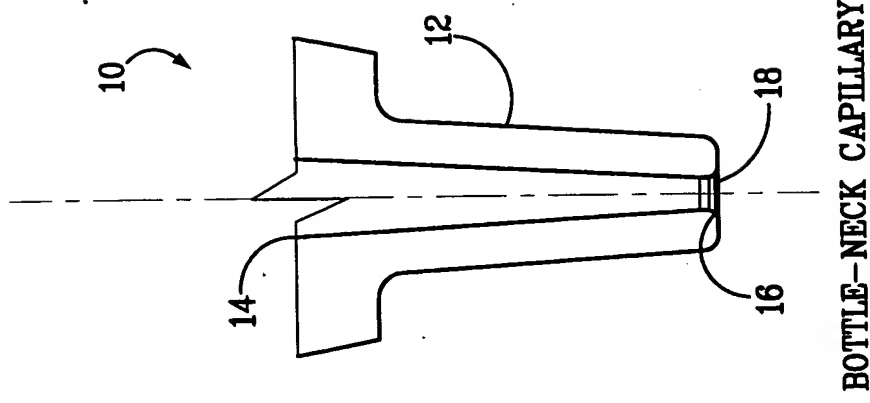
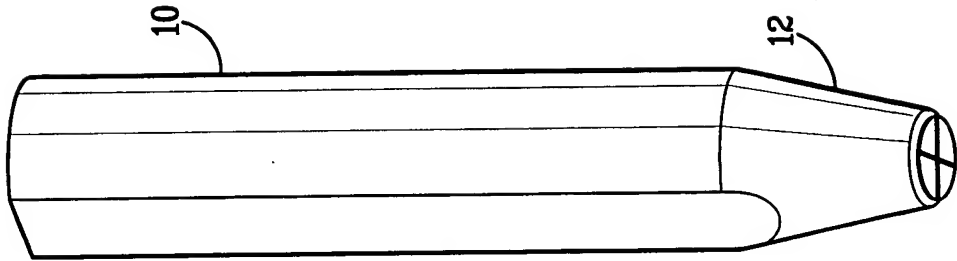


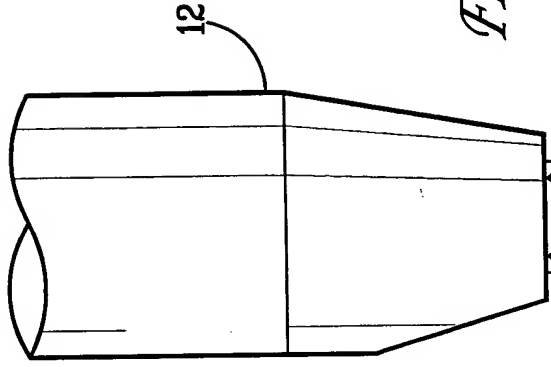
FIG. 3

PRIOR ART



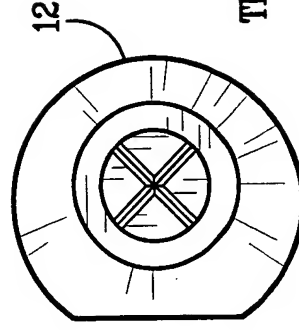
*FIG. 4*

PRIOR ART



*FIG. 5A*

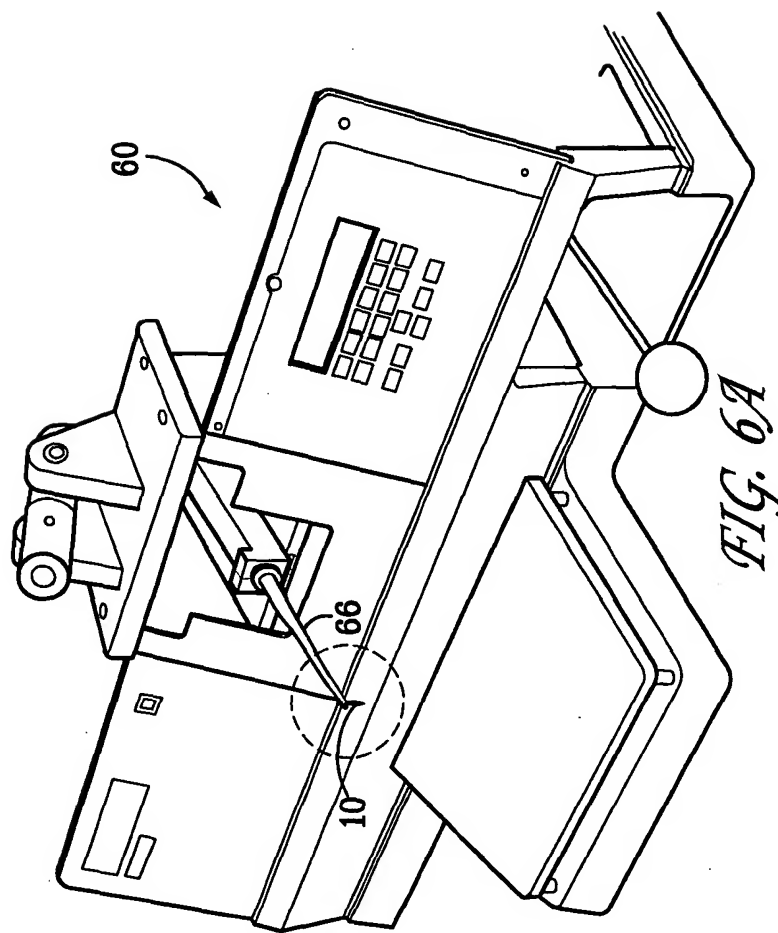
PRIOR ART



*FIG. 5B*

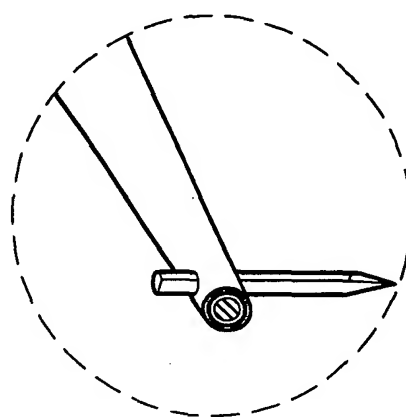
TIP DETAIL

PRIOR ART



*FIG. 6A*

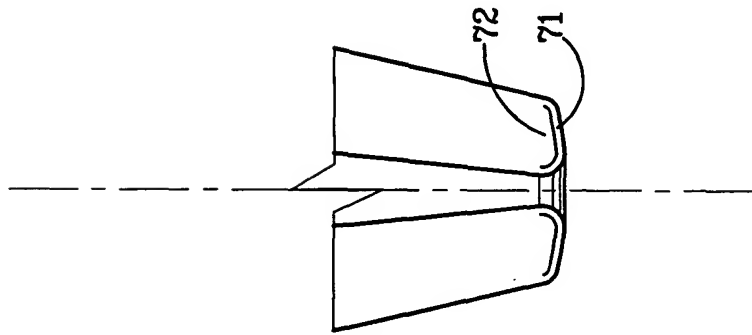
PRIOR ART



Transducer Horn Tip and Wedge Detail

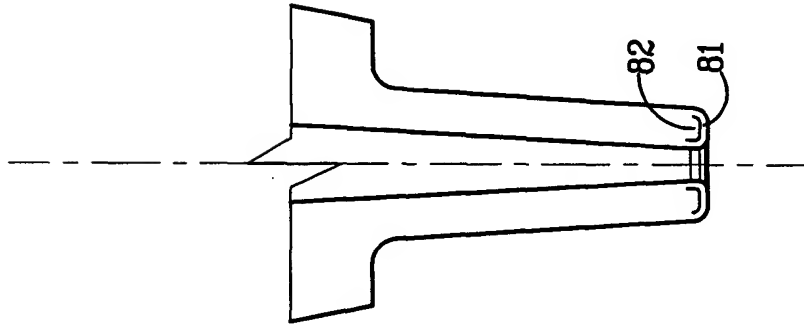
*FIG. 6B*

PRIOR ART



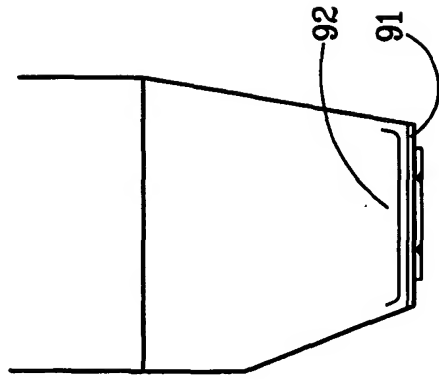
NORMAL CAPILLARY

*FIG. 7*



BOTTLE-NECK CAPILLARY

*FIG. 8*



TIP DETAIL

*FIG. 9*

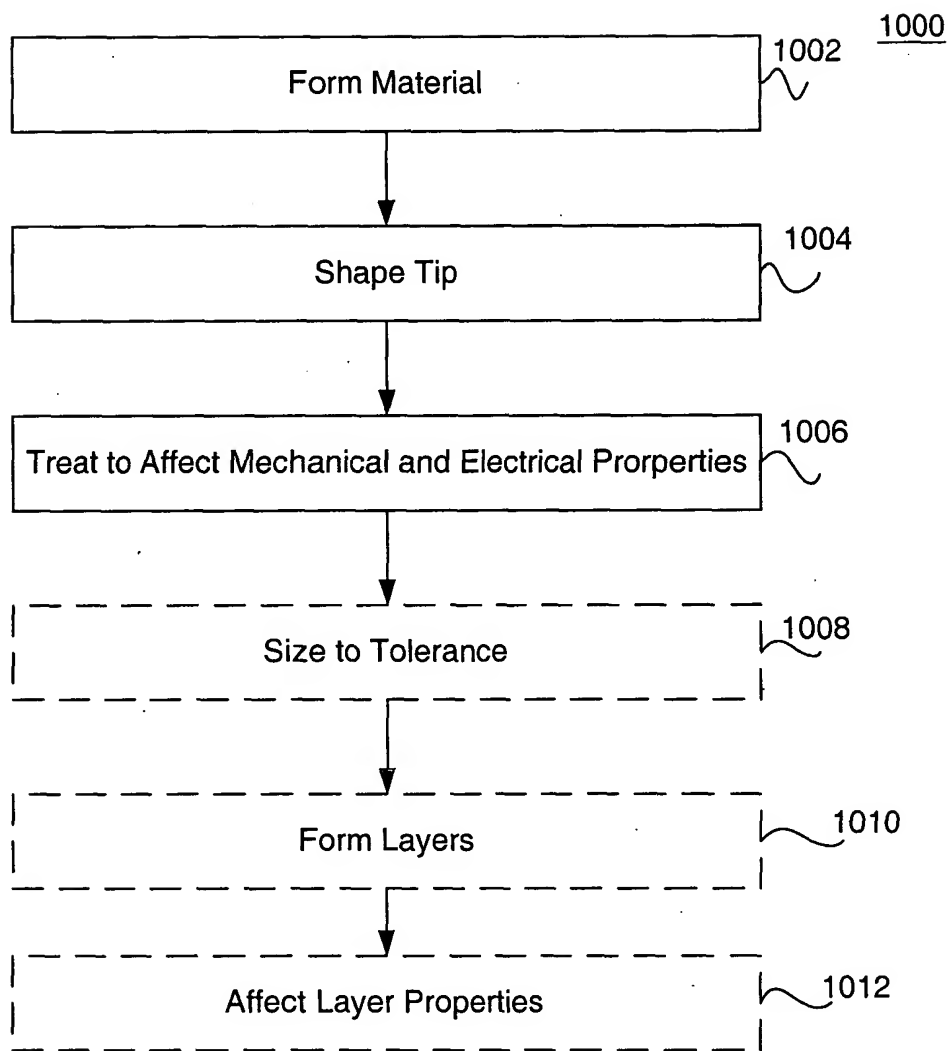


FIG. 10

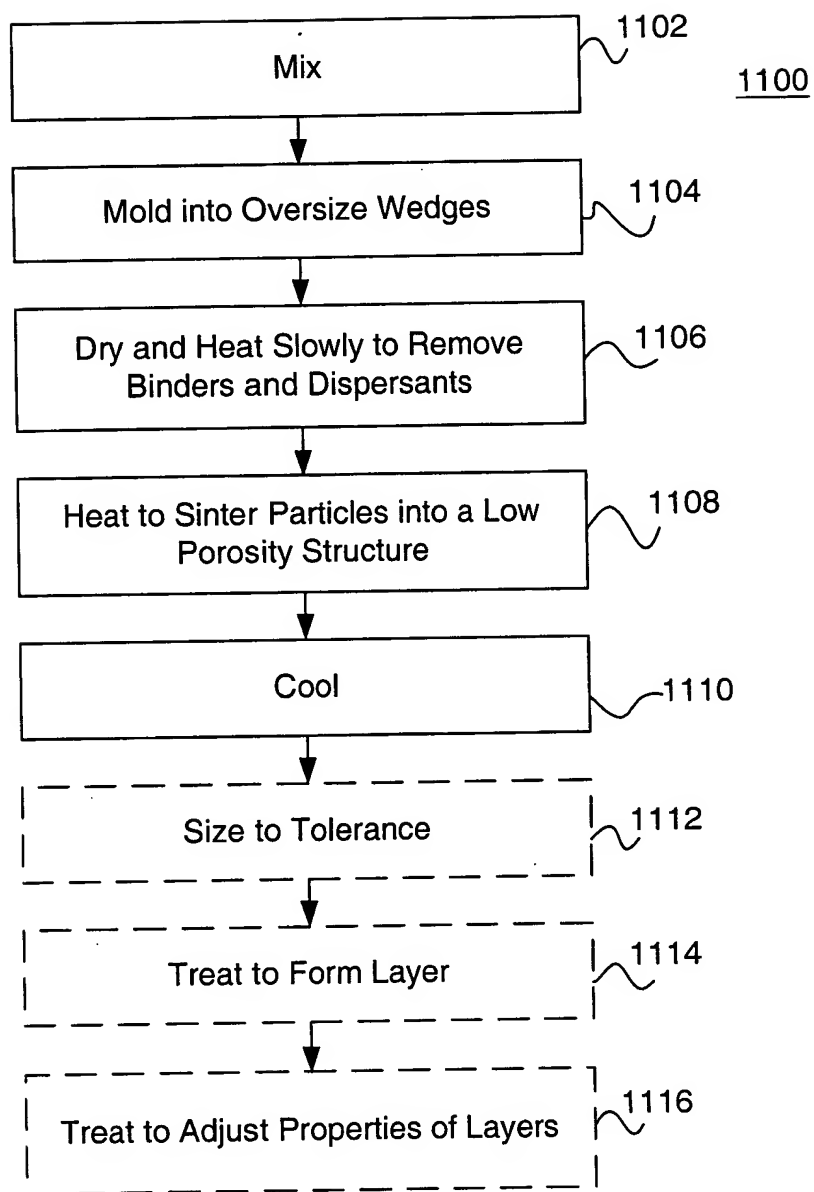


FIG. 11

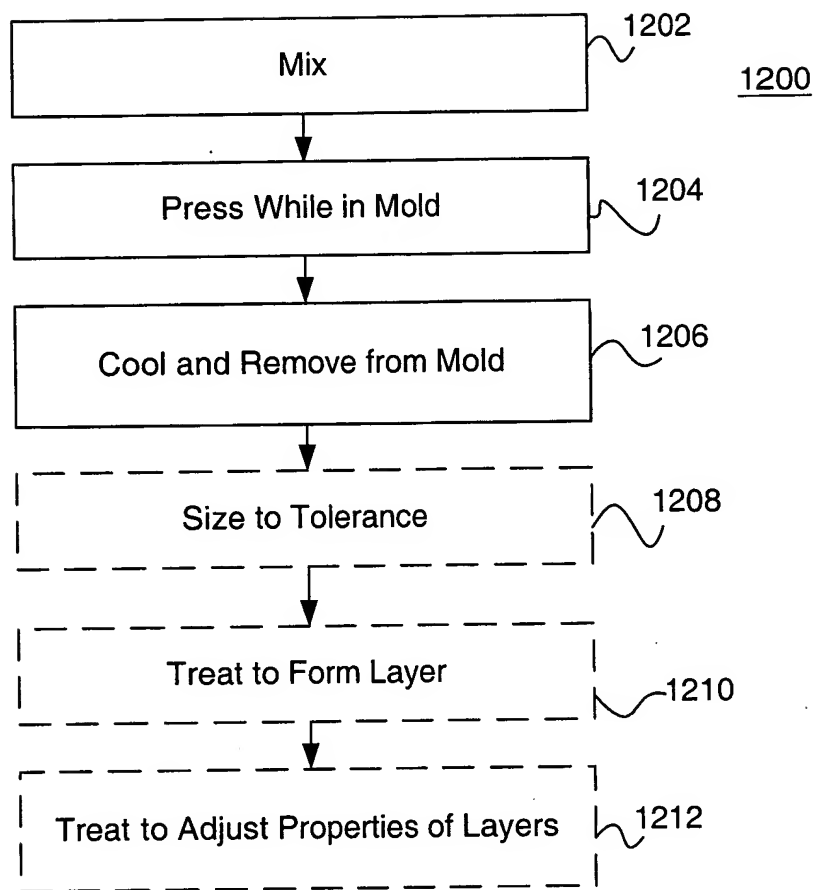


FIG. 12

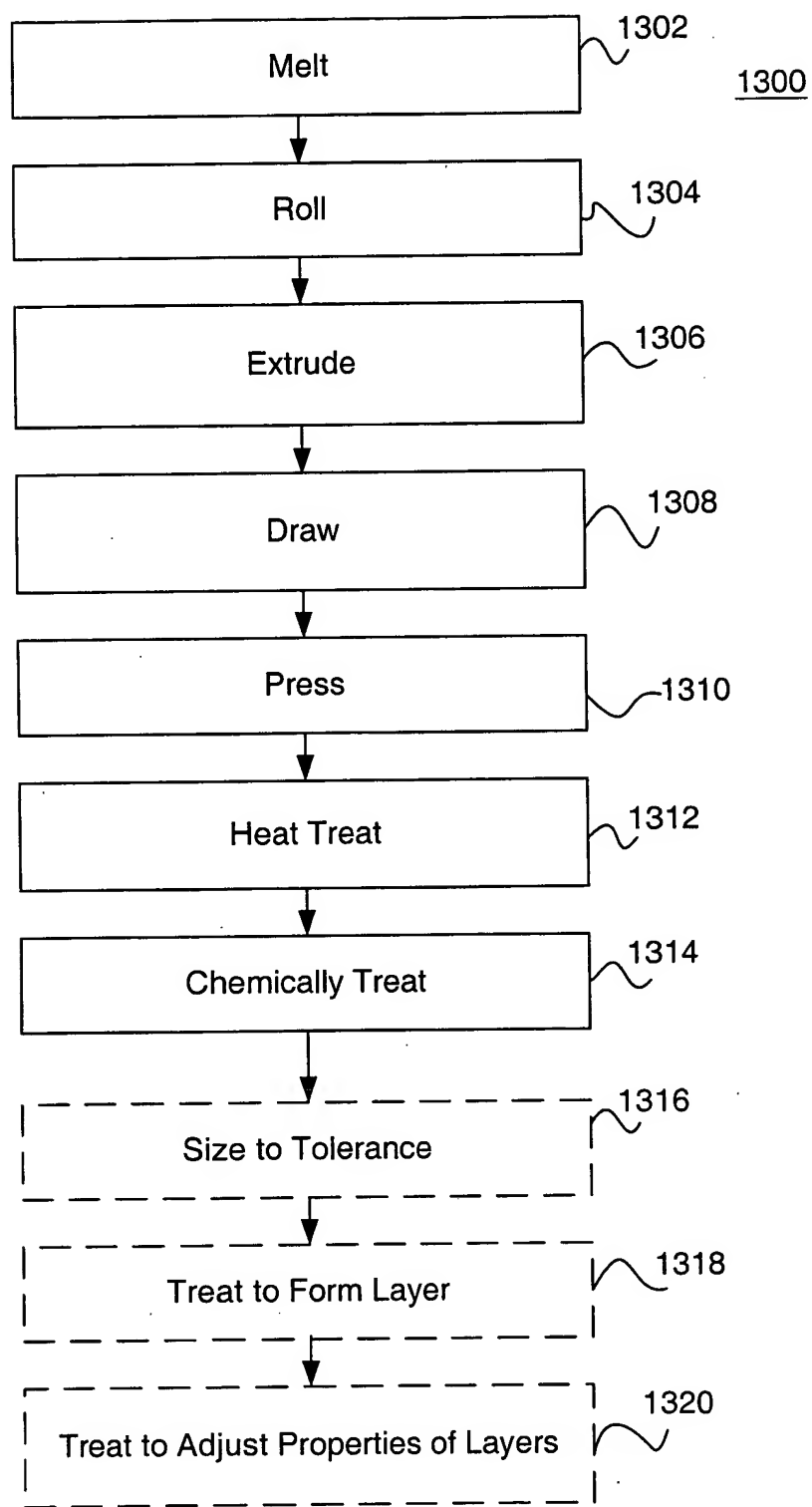


FIG. 13



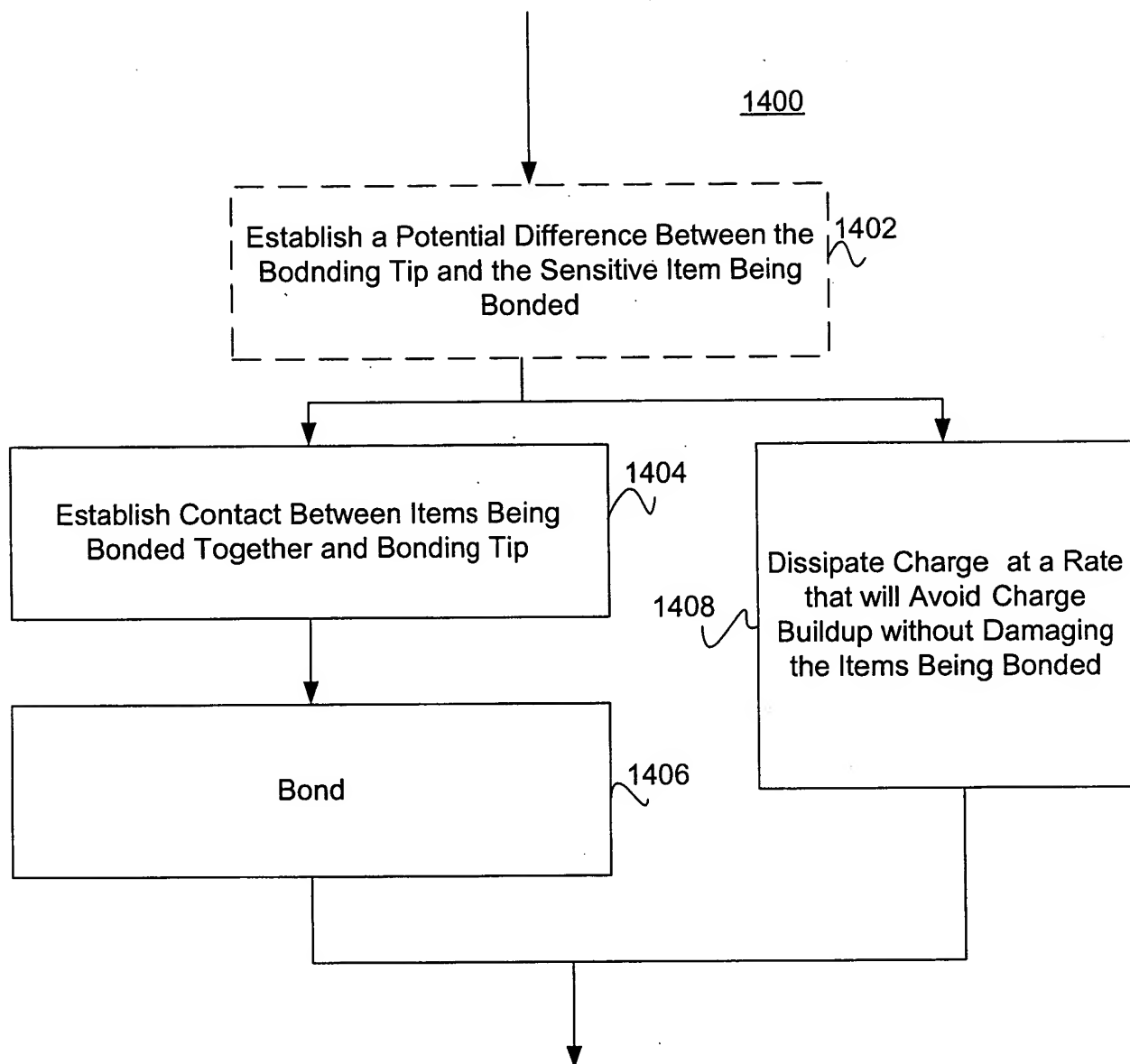


FIG. 14

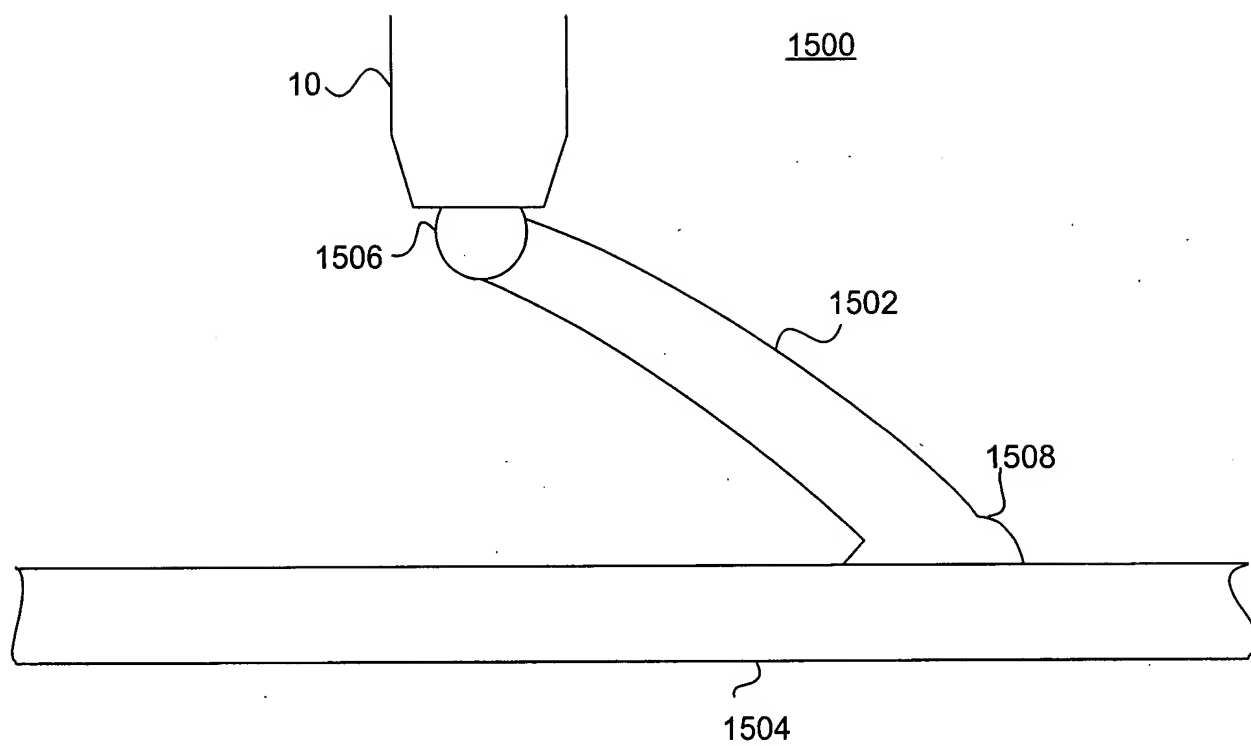
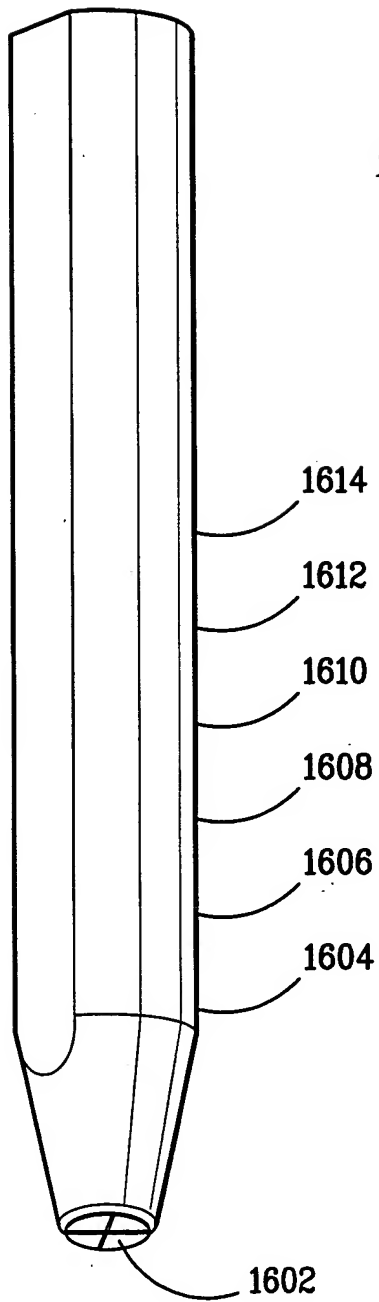


FIG. 15

*FIG. 16*



| Reading @ | Rod #1                    |                           | Rod #2                    |                           |
|-----------|---------------------------|---------------------------|---------------------------|---------------------------|
|           | 10V                       | 100V                      | 10V                       | 100V                      |
| 1"        | $2.11 \times 10^8 \Omega$ | $1.80 \times 10^8 \Omega$ | $2.38 \times 10^8 \Omega$ | $1.89 \times 10^9 \Omega$ |
| 2"        | $2.78 \times 10^8 \Omega$ | $2.42 \times 10^8 \Omega$ | $4.13 \times 10^8 \Omega$ | $3.63 \times 10^8 \Omega$ |
| 3"        | $3.34 \times 10^8 \Omega$ | $3.03 \times 10^8 \Omega$ | $5.49 \times 10^8 \Omega$ | $5.17 \times 10^8 \Omega$ |
| 4"        | $4.35 \times 10^8 \Omega$ | $4.09 \times 10^8 \Omega$ | $8.52 \times 10^8 \Omega$ | $8.25 \times 10^8 \Omega$ |
| 5"        | $5.67 \times 10^8 \Omega$ | $5.46 \times 10^8 \Omega$ | $1.27 \times 10^9 \Omega$ | $1.22 \times 10^9 \Omega$ |
| 6"        | $7.05 \times 10^8 \Omega$ | $6.93 \times 10^8 \Omega$ | $1.26 \times 10^9 \Omega$ | $1.23 \times 10^9 \Omega$ |
| Average   | $4.22 \times 10^8 \Omega$ | $3.96 \times 10^8 \Omega$ | $7.64 \times 10^8 \Omega$ | $1.01 \times 10^9 \Omega$ |
| Minimum   | $2.11 \times 10^8 \Omega$ | $1.80 \times 10^8 \Omega$ | $2.38 \times 10^8 \Omega$ | $3.63 \times 10^8 \Omega$ |
| Maximum   | $7.05 \times 10^8 \Omega$ | $6.93 \times 10^8 \Omega$ | $1.27 \times 10^9 \Omega$ | $1.89 \times 10^9 \Omega$ |

FIG. 17

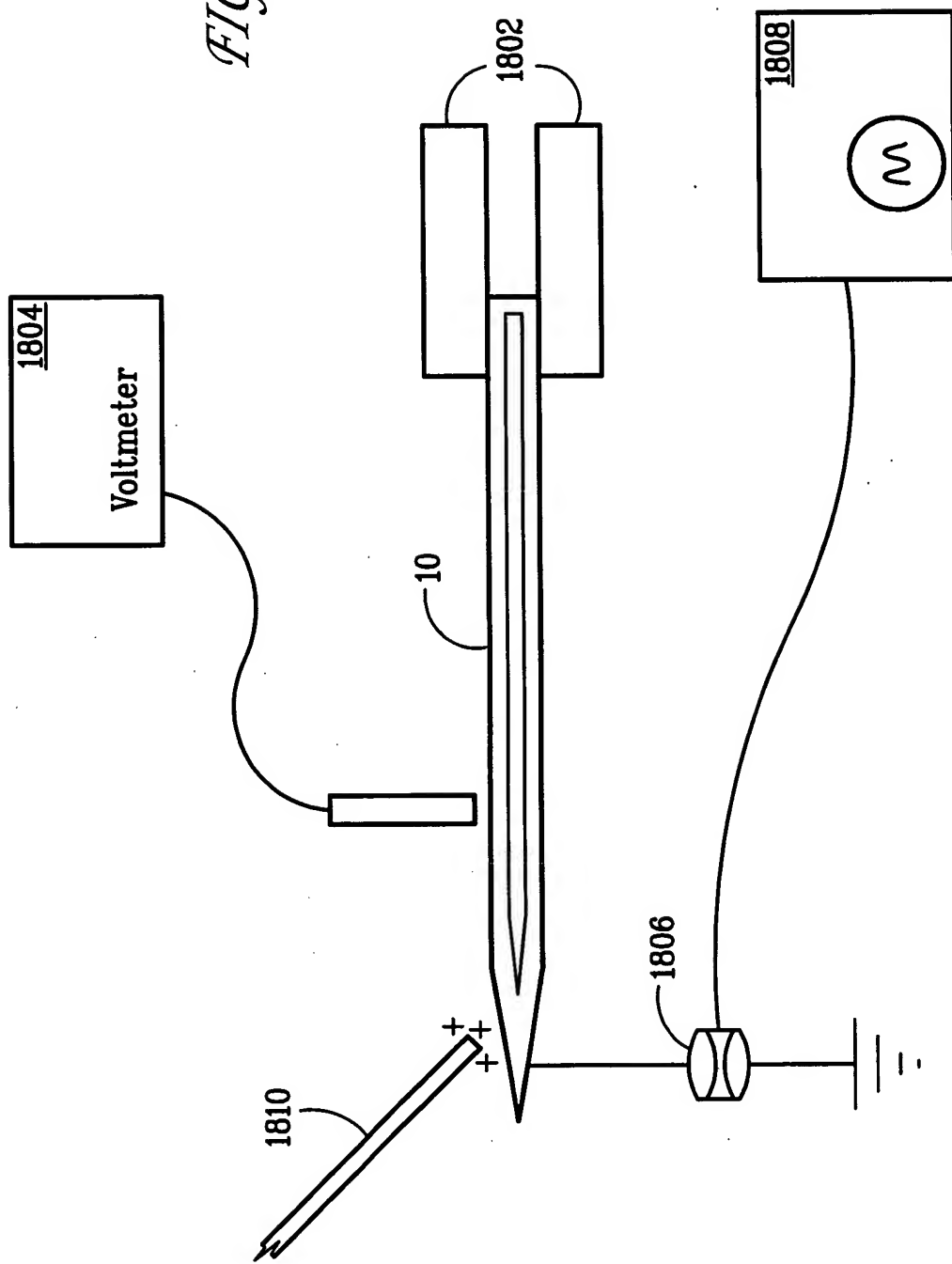


FIG. 18

| Reading # | Small Diameter<br>Rod #1 | Small Diameter<br>Rod #2 |
|-----------|--------------------------|--------------------------|
| 1         | 0.16 sec.                | 0.48 sec.                |
| 2         | 0.16 sec.                | 0.21 sec.                |
| 3         | 0.20 sec.                | 0.12 sec.                |
| 4         | 0.21 sec.                | 0.22 sec.                |
| 5         | 0.21 sec.                | 0.23 sec.                |
| 6         | 0.15 sec.                | 0.22 sec.                |
| Average   | 0.18 sec.                | 0.25 sec.                |
| Minimum   | 0.15 sec.                | 0.12 sec.                |
| Maximum   | 0.21 sec.                | 0.48 sec.                |

FIG. 19

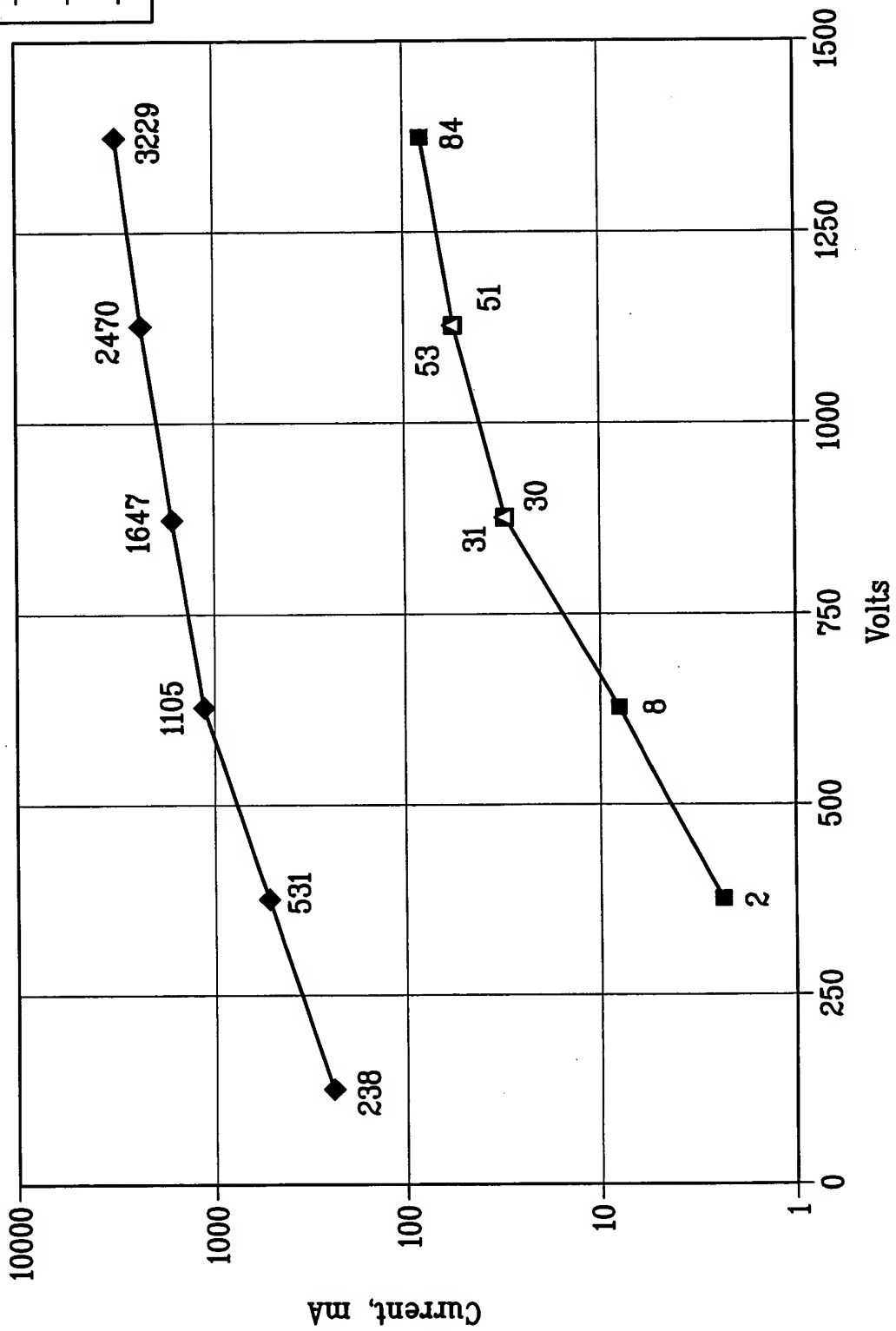
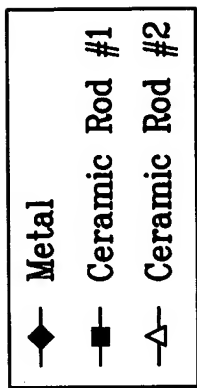


FIG. 20